

In the Drawings:

The attached sheet of drawings include changes to Fig. 1A This sheet replaces the original sheet including Fig. 1A In this figure, the label "Assembly + Kennel" was replaced with the label "Assembly + Kernel".

REMARKS

Favorable consideration of this application is respectfully requested.

Claims 5-7, 12, and 71-92 are currently active in this case. Claims 3, 4, 8-11, 16-18, 20, 31, 38-42, 45, and 49-54 have been canceled, Claims 5 and 12 have been amended, and Claims 71-92 have been added by way of the present amendment. Each new and amended claim is supported by the specification and claims as originally submitted and no new matter has been added.

In the outstanding Official Action, the specification and drawings objected to; **Claims 42, 45, 49-54 being provisionally rejected under non-statutory double patenting**; Claims 42, 53 and 54 were rejected under 35 U.S.C. §102(b) over *Wortel* (U.S. Patent No. 5,820,241); Claim 31 was rejected under 35 U.S.C. §102(b) over *Nakanishi* (U.S. Patent No. 6,183,090); Claims 45 and 49-52 were rejected under 35 U.S.C. §103(a) over *Wortel* in view of *Schadt et al.* ("New Liquid Crystal Polarized Projection Principle", Jap. J. Appl. Phys., vol. 29, no. 10, Oct. 1990, pp. 1974-1984, hereinafter *Schadt*); Claims 3, 4, 8, and 9 were rejected under 35 U.S.C. §103(a) over *Nakanishi* in view of *Faris* (U.S. Patent No. 6,563,553); Claim 10 was rejected under 35 U.S.C. §103(a) over *Nakanishi* in view of *Faris*; Claim 11 was rejected under 35 U.S.C. §103(a) over *Nakanishi* in view of *Faris*; Claims 16-18 and 20 were rejected under 35 U.S.C. §103(a) over *Nakanishi* in view of *Faris* and further in view of *Johnson et al.* (U.S. Patent No. 6,183,091, hereinafter *Johnson*); Claim 38 was rejected under 35 U.S.C. §103(a) over *Nakanishi* in view of *Faris*; and Claims 39-41 were rejected under 35 U.S.C. §103(a) over *Nakanishi* in view of *Faris* and further in view of *Schadt*.

Applicants appreciatively acknowledge the identification of allowable subject matter in Claims 5-7 and 12.

Applicants also appreciatively acknowledge the courtesy of an interview granted by Examiner Lavarias on Tuesday April 12th. Several of the currently pending claims were discussed, but no final opinion as to patentability could be reached without further search and/or review.

Applicants respectfully request cancellation of Claims 3, 4, 8-11, 16-18, 20, 31, 38-42, 45, and 49-54 without prejudice.

Applicants have amended the specification to include an appropriate reference to the provisional application to which priority is claimed. Accordingly, Applicants respectfully request that the objection based on priority be withdrawn.

Applicants respectfully submit herewith corrected drawing 1A addressing the typographical error noted by the Examiner in the outstanding Office Action. Accordingly, Applicants respectfully request that those objections be withdrawn.

The specification has been amended as suggested by the Examiner in paragraph 6 of the outstanding Office Action. Accordingly, Applicants respectfully request that the objections to the disclosure based on informalities be withdrawn.

Applicants respectfully traverse the objections to the specification as failing to provide an antecedent basis for claimed subject matter in each of Claims 9 and 20. However, since Claims 9 and 20 have been cancelled the issue is believed to be rendered moot.

Applicants have amended the specification to include discussion at page 5, line 13 drawn directly from Claims 50 and 54, the abstract, the drawings, and disclosure as originally submitted. Therefore, Applicants respectfully submit that Claims 50 and 54 have a sufficient antecedent basis in the specification, and, since the included discussion is drawn directly from the application as originally submitted, Applicants respectfully submit that no new matter has been added.

Accordingly, Applicants respectfully request that the objections to Claims 50 and 54 be withdrawn.

Each of the claims rejected under nonstatutory type double patenting have been cancelled. Accordingly, Applicants respectfully submit that the double patenting rejection is now moot.

Claims 5 and 12 have been amended to be in independent form including all the limitations of their respective base and any intervening claims. Therefore, since Claims 5 and 12 have already been identified as containing allowable subject matter, Applicants respectfully submit that Claims 5 and 12 are patentable over the cited art references.

New Claim 71 recites:

***71. (New) A prism assembly, comprising:
a cholesteric layer configured to,
reflect a first color of a polarized input light toward a first
modulating device,
pass a second color of the polarized input light toward a
second modulating device,
pass modulated light emanating from the first modulating
device toward an output; and
reflect modulated light emanating from the second
modulating device toward the output.***

However, the cited references fail to teach or suggest similar subject matter.

New Claim 82 recites:

82. (New) A device, comprising:

a beam splitter comprising an input face, and output face, a first processing face, and a second processing face; and a beam splitting layer;

a first reflective modulating device attached to the first processing face; and

a second reflective modulating device attached to the second processing face;

wherein:

the beam splitting layer comprises,

a first cholesteric layer that, reflects a portion of light entering the device from the input face toward the first processing face, and passes modulated light from the first reflective modulating device toward the output face, and

a second cholesteric layer that, passes a second portion of light entering the device from the input face toward the second modulating face, passes the modulated light from the first reflective modulating device toward the output face, and reflects modulated light from the second reflective modulating device toward the output face.

However, the cited references fail to teach or suggest similar subject matter.

New Claim 86 recites:

86. (New) A prism assembly, comprising:

an input PBS positioned to split input light into first and second light beams;

a processing PBS and a first modulating device configured to modulate the first light beam with first color data to produce a first modulated light beam;

a cholesteric based beam splitter and combiner configured to,

direct a first part of the second light beam toward a second modulating device configured to modulate the first part with second color data,

direct a second part of the second light beam toward a third modulating device configured to modulate the second part with third color data, and

combine the first and second modulated parts of the second light beam to produce a second modulated light beam; and

an output combiner configured to combine the first modulated light beam and the second modulated light beam to produce an output modulated light beam.

However, the cited references fail to teach or suggest similar subject matter.

New Claim 89 recites:

89. (New) A quad style prism assembly, comprising:

a prism assembly divided into 4 equal sized quadrants, each quadrant comprising a beam splitter;

the first quadrant comprising an input beam splitter positioned to split input light into first and second light beams;

the second quadrant comprising a processing PBS and a modulating device configured to modulate the first light beam with a first color;

the third quadrant comprising a cholesteric based beam splitter and second and third modulating devices configured to, separate the second light beam into separated light beams, modulate second color data into a first of the separated light beams, modulate third color data into a second of the separated

color light beams, and then recombine the separated light beams; and

the fourth quadrant comprising an output PBS configured to recombine the modulated light beams.

However, the cited references fail to teach or suggest similar subject matter.

Applicants respectfully note that, even if combined, the cited references fail to teach or suggest that claimed in either of new Claims 71, 82, 86, and 89. Accordingly, Applicants respectfully submit that Claims 71, 82, 86, and 89 are patentable over the cited art references.

Based on the patentability of independent Claims 5, 12, 71, 82, 86, and 89, Applicants respectfully submit that each claim dependent therefrom is also patentable.

If the Examiner disagrees with any of the foregoing, the Examiner is cordially invited to call the undersigned who will be happy to work with the Examiner to satisfactorily resolve any such issues.

Consequently, no further issues are believed to be outstanding, and it is respectfully submitted that this case is in condition for allowance. An early and favorable action is respectfully requested.

Respectfully submitted,
REED SMITH LLP

Dated: _____

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By: _____

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